

## Anti-NUMA1 Antibody (4G738)

## Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4G738
Purification:	Affinity-chromatography

## Applications

Verified Activity:	Overlay Peak curve showing Hela cells stained with TMAH-00838 (red line) at 1:50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1µg/1*10 <sup>6</sup> cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG (H+L) at 1:200 dilution for 35min at 4°C. Control antibody (green line) was rabbit IgG (1µg/1*10 <sup>6</sup> cells) used under the same conditions. Acquisition of >10,000 events was performed.
Application:	ELISA,FCM
Recommended	FCM:1:50-1:200.

## Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

## Antigen Details

Immunogen:	A synthetic peptide: Human NUMA1
Antigen Species:	Human
Gene ID:	4926
Uniprot ID:	Q14980
Synonyms:	Nuclear matrix protein-22;NuMA protein;Nuclear mitotic apparatus protein 1;NMP-22;NMP22; NUMA 1;Nuclear mitotic apparatus protein;SP-H antigen;NUMA
Biology Area:	Cell biology

## Research Background

Microtubule (MT)-binding protein that plays a role in the formation and maintenance of the spindle poles and the alignment and the segregation of chromosomes during mitotic cell division. Functions to tether the minus ends of MTs at the spindle poles, which is critical for the establishment and maintenance of the spindle poles. Plays a role in the establishment of the mitotic spindle orientation during metaphase and elongation during anaphase in a dynein-dynactin-dependent manner. In metaphase, part of a ternary complex composed of GPM2 and G(i) alpha proteins, that regulates the recruitment and anchorage of the dynein-dynactin complex in the mitotic cell cortex regions situated above the two spindle poles, and hence regulates the correct orientation of the mitotic spindle. During anaphase, mediates the recruitment and accumulation of the dynein-dynactin complex at the cell membrane of the

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polar cortical region through direct association with phosphatidylinositol 4,5-bisphosphate (PI(4,5)P<sub>2</sub>), and hence participates in the regulation of the spindle elongation and chromosome segregation. Binds also to other polyanionic phosphoinositides, such as phosphatidylinositol 3-phosphate (PIP), lysophosphatidic acid (LPA) and phosphatidylinositol triphosphate (PIP<sub>3</sub>), in vitro. Also required for proper orientation of the mitotic spindle during asymmetric cell divisions. Plays a role in mitotic MT aster assembly. Involved in anastral spindle assembly. Positively regulates TNKS protein localization to spindle poles in mitosis. Highly abundant component of the nuclear matrix where it may serve a non-mitotic structural role, occupies the majority of the nuclear volume. Required for epidermal differentiation and hair follicle morphogenesis.

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